

FUKUI, A. et al.
Appl. No. 10/815,976
Atty. Ref.: 900-495
Amendment
Monday, November 30, 2009

REMARKS

Reconsideration is requested.

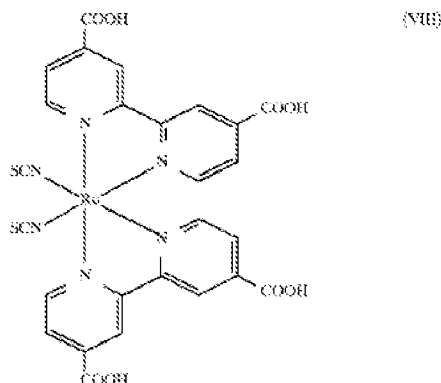
Claims 1, 2, 21, 26, 27, 28 and 35 are pending.

Claim 26 has been amended to correct a typographical error in the Amendment
After Final Rejection filed June 11, 2009.

The Examiner is again requested to confirm receipt of the certified copies of the priority documents filed April 2, 2004. See previous Request for same filed January 22, 2009. The Examiner is requested to enter a BIB DATASHEET in the PTO IFW confirming receipt of the priority documents and claim for priority as well as other relevant information relating to the present application.

The Section 103 rejection of claims 1, 2, 21, 26-28 and 35 over Lupo (U.S. Patent No. 5,885,368) and Andriessen (WO2004/025748) "as evidenced by" Gaudiana (U.S. Patent Application Publication No. 2005/0257827) is traversed. Reconsideration and withdrawal of the rejection are requested in view of the following distinguishing comments.

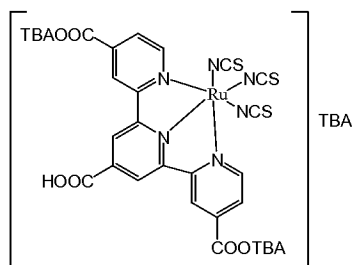
The Examiner is relies on Lupo for the teaching of the following chromophore (VIII) of Lupo:



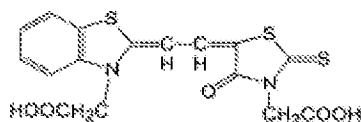
, which the Examiner has identified

as cis-bis(isothiocyanato)bis(2,2'-bipyridyl-4,4'-dicarboxylato)-ruthenium(II). See page 2 of the Office Action dated January 13, 2009 and page 3 of the Office Action dated July 28, 2009.

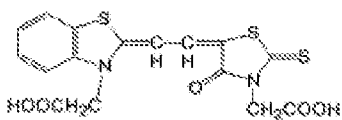
The claims require the following dye sensitizer of formula (1):



or a dye sensitizer of the following formula



The terpyridine structure of formula (1) of the claims is not suggested by the bipyridine structure of formula (VIII) of Lupo. The dye sensitizer structure

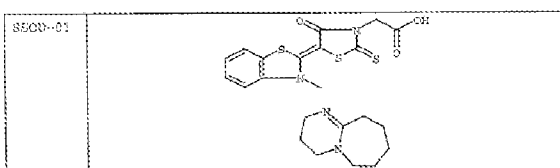


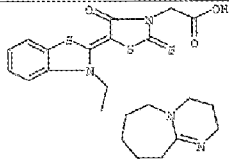
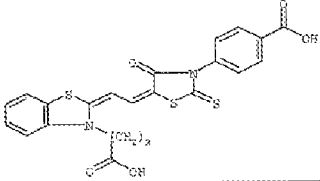
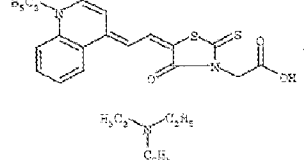
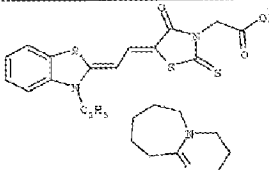
of the claims is not suggested by Lupo.

The Examiner recognizes that the dye sensitizers of the claims are not taught by Lupo. See page 3 of the Office Action dated July 28, 2009.

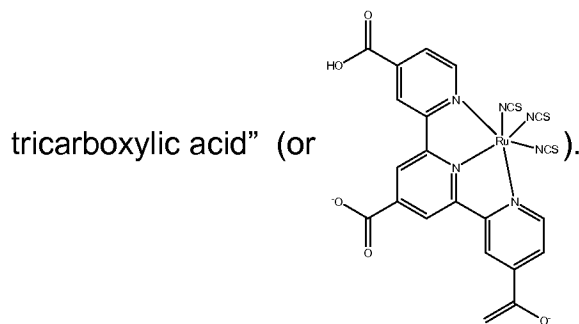
Andriessen fails to cure the deficiencies of Lupo noted above. Moreover, the cited combination of art would not have led one of ordinary skill in the art to predict the unexpectedly beneficial results achieved with the claimed invention, as demonstrated by the present disclosure. Even if one of ordinary skill would have used a dye sensitizer of the secondary reference in place of a dye sensitizer of the primary reference, as alleged by the Examiner, the ordinarily skilled person would not have expected the beneficial results achieved by the claimed product.

The Examiner relies on the secondary reference to teach a sensitizers of the following structures which the Examiner believes would have allegedly been obvious to use in place of the chromophore of formula (VIII) of Lupo to allegedly have made the claimed invention:



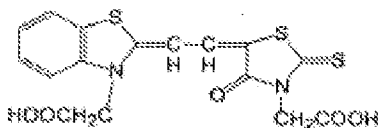
SSOD-02	
SSOD-03	
SSOD-04	
SSOD-05	

and “(anion only) tris(isothiocyanato)-ruthenium(II)-2,2':6',2''-terpyridine-4,4',4''-



The Examiner asserts that it allegedly would have been obvious to have replaced the organic dye sensitizers of Lupo with the organic dye sensitizers of Andriessen because Andriessen teaches that the dyes are spectrally sensitizing dyes. See page 4 of the Office Action dated July 28, 2009. There is no suggestion however in Lupo or Andriessen to have selected the combination of the claims.

The applicants further note that Andriessen specifically teaches the “anion only” of tris(isothiocyanato)-ruthenium(II)-2,2':6',2''-terpyridine-4,4',4''- tricarboxylic acid whereas the claims require the tris-tetrabutylammonium salt. The selection of the tris-tetrabutylammonium salt of tris(isothiocyanato)-ruthenium(II)-2,2':6',2''-terpyridine-4,4',4''-tricarboxylic acid would have been contrary to the specific requirement of Andriessen for the “anion only”. With regard to the “SSOD” structures of Andriessen noted by the Examiner, the SSOD-05 structure is not a homolog of the structure of the

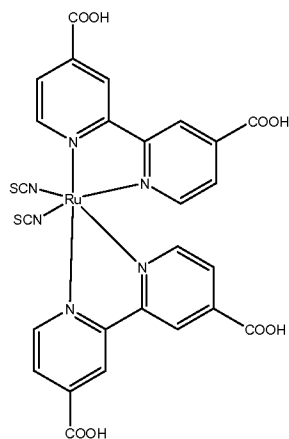


structure of the claims in that the ethyl of the “SSOD-5” structure of the art is not a homolog of the acetic acid structure of the claimed structure.

The claims are submitted to be patentable over the combination of Lupo (U.S. Patent No. 5,885,368) and Andriessen (WO2004/025748) “as evidenced by” Gaudiana (U.S. Patent Application Publication No. 2005/0257827). Withdrawal of the Section 103 rejection of claims 1, 2, 21, 26-28 and 35 based on same is requested.

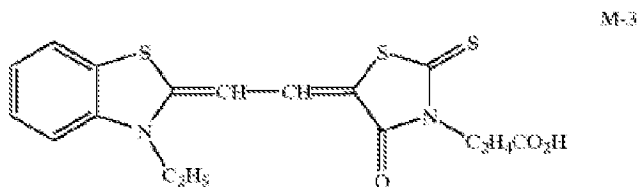
The Section 103 rejection of claims 1, 2, 21, 27, 28 and 35 over Yoshikawa (PGPub 20020040728) is traversed. Reconsideration and withdrawal of the rejection are requested in view of the following distinguishing remarks and the attached Declaration of Dr. Atsushi FUKUI.

As with Lupo, the Examiner relies on the above structure (i.e.,



formula (III) as defined by R-1 in ¶ [0111] of Yoshikawa; see the

paragraph spanning pages 6-7 of the Office Action dated July 28, 2009) and the following structure M-3 of Yoshikawa:



to assert that it would have been

obvious to have made the claimed invention as these structures of Yoshikawa are allegedly homologs of the claimed structure “which are generally of sufficiently close structural similarity ... that there is a presumed expectation that such compounds possess similar properties.” See page 7 of the Office Action dated July 28, 2009. As noted above however, the structure of formula (III) as defined by R-1 of Yoshikawa is a bipyridine structure which is not suggestive of the terpyridine structure of the claims. Moreover, the structure M-3 of Yoshikawa which contains an ethyl is not suggestive of the acetic acid substitution of the claimed sensitizer.

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Further, the applicants submit that the attached Declaration demonstrates that the claimed feature relating to the absorbance peak is not described or suggested by the cited art.

The claims are submitted to be patentable over Yoshikawa and withdrawal of the Section 103 rejection of claims 1, 2, 21, 27, 28 and 35 based on same is requested.

The Section 103 rejection of claim 26 over Yoshikawa in view of Andriessen "as evidenced by" Gaudiana is traversed. Reconsideration and withdrawal of the rejection are requested for reasons similar to those provided above with regard to the Examiner's combination of Lupo, Andriessen and Gaudiana as the Examiner is understood to rely on Yoshikawa in rejecting claim 26 for a teaching of the same compound which is the basis of the Examiner's reliance on Lupo. Consideration of the attached Declaration and above comments relating to same is also requested. Withdrawal of the Section 103 rejection of claim 26 is requested.

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned, preferably by telephone, in the event anything further is required to place the present application in condition for allowance.

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Respectfully submitted,

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